JOURNAL OF GEODYNAMICS

Editor-in-Chief: ANTON L. HALES
Executive Editors: WOLF R. JACOBY, NICHOLAS RAST

VOLUME CONTENTS AND AUTHOR INDEX
VOLUME 13, 1991

PERGAMON PRESS
OXFORD • NEW YORK • SEOUL • TOKYO

JOURNAL OF GEODYNAMICS

EDITOR-IN-CHIEF: **A. L. Hales** (Canberra, Australia)

EXECUTIVE EDITORS

W. R. Jacoby
Johannes Gutenberg-Universität Mainz
Institut für Geowissenschaften
Saarstr 21, D-6500 Mainz
Germany

N. Rast
College of Arts and Sciences
Department of Geological Sciences
Bowman Hall, University of Kentucky
Lexington, KY 40506-0059, U.S.A.

EDITORIAL BOARD

K. Aki	(Los Angeles, CA, U.S.A.)	**A. R. Ritsema**	(De Bilt, The Netherlands)
D. L. Anderson	(Pasadena, CA, U.S.A.)	**L. Rybach**	(Zurich, Switzerland)
K. C. Burke	(Washington, DC, U.S.A.)	**I. S. Sacks**	(Washington, DC, U.S.A.)
F. Chayes	(Washington, DC, U.S.A.)	**J. H. Sass**	(Flagstaff, AZ, U.S.A.)
D. Denham	(Canberra, Australia)	**H.-U. Schmincke**	(Kiel, Germany)
A. M. Dziewonski	(Cambridge, MA, U.S.A.)	**E. A. Silver**	(Santa Cruz, CA, U.S.A.)
E. R. Engdahl	(Denver, CO, U.S.A.)	**S. L. Soloviev**	(Moscow, Russia)
S. A. Fedotov	(Petropavlovsk, Russia)	**S. Steinthorsson**	(Reykjavik, Iceland)
M. O. Garcia	(Honolulu, HI, U.S.A.)	**H. Stiller**	(Potsdam, Germany)
A. Kröner	(Mainz, Germany)	**S. R. Taylor**	(Canberra, Australia)
X. Le Pichon	(Paris, France)	**M. N. Toksöz**	(Cambridge, MA, U.S.A.)
R. Meissner	(Kiel, Germany)	**D. L. Turcotte**	(Ithaca, NY, U.S.A.)
P. Morgan	(Flagstaff, AZ, U.S.A.)	**S. Uyeda**	(Tokyo, Japan)
S. Mueller	(Zurich, Switzerland)	**R. Van der Voo**	(Ann Arbor, MI, U.S.A.)
A. Nicolas	(Montpellier, France)	**P. Vyskočil**	(Prague, Czechoslovakia)
L. O. Nicolaysen	(Johannesburg, S. Africa)	**B. F. Windley**	(Leicester, England)
H. C. Noltimier	(Columbus, OH, U.S.A.)	**P. J. Wyllie**	(Pasadena, CA, U.S.A.)

Publishing Office

Pergamon Press Ltd, Pergamon House, Bampfylde Street, Exeter EX1 2AH, England
[*Tel.* Exeter (0392) 51558; *Fax* (0392) 425370]

Subscription and Advertising Offices

North America—Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.
Rest of the World—Pergamon Press Ltd, Headington Hill Hall, Oxford OX3 0BW, England
[*Tel.* Oxford (0865) 794141]

Subscription Rates

Annual institutional subscription rate (1992): £225.00 (US$410.00). Two-year institutional rate (1992/93): £427.50 (US$779.00). Sterling prices are definitive. U.S. dollar prices are quoted for convenience only, and are subject to exchange rate fluctuation. Prices include postage and insurance and are subject to change without notice. Subscription rates for Japan are available on request.

Back Issues

Back issues of all previously published volumes are available direct from Pergamon Press.

Published 8 issues/annum in April, May, June, July, August, September, October and November

Copyright © 1992 Pergamon Press Ltd

Application to mail at second class postage rate is pending at RAHWAY NJ. Postmaster send address corrections to *Journal of Geodynamics*, c/o Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, U.S.A.

LIST OF CONTENTS

NUMBER 1

Publishers notice	i	
Huan-yen Loo and Xiang-hong Kong	1	Three-dimensional numerical modeling of seismo-tectonic movement with relation to local gravity change
Shaopeng Huang and Jiyang Wang	13	On variations of heat flow and Pn velocity—a case study from the continental area of China
V. Hanuš and J. Vaněk	29	Paleoplates buried in the upper mantle and the cyclic character of subduction
C. Doglioni, I. Moretti and F. Roure	47	Basal lithospheric detachment, eastward mantle flow and Mediterranean geodynamics: a discussion
S. R. Sharma, A. Sundar, V. K. Rao and D. V. Ramana	67	Surface heat flow and Pn velocity distribution in Peninsular India
M. E. Artemjev and M. K. Kaban	77	Isostatic processes and intracontinental orogenesis
S. V. Krylov, B. P. Mishenkin and A. V. Bryskin	87	Deep structure of the Baikal rift from multiwave seismic explorations

NUMBERS 2-4

OPHIOLITES AND THE OCEANIC LITHOSPHERE

Mathilde Cannat, Vassilios Mamaloukas-Frangoulis, Jean-Marie Auzende, Daniel Bideau, Enrico Bonatti, José Honnorez, Yves Lagabrielle, Jacques Malavieille and Catherine Mevel	97	A geological cross-section of the Vema fracture zone transverse ridge, Atlantic Ocean
S. M. Agar	119	Microstructural evolution of a deformation zone in the upper ocean crust: evidence from DSDP hole 504B
G. Mascle, M. Lemoine, J. Mascle, J. P. Rehault and P. Tricart	141	Ophiolites and the oceanic crust: new evidence from the Tyrrhenian Sea and the Western Alps

P. Tricart and M. Lemoine	163	The Queyras ophiolite west of Monte Viso (Western Alps): indicator of a peculiar ocean floor in the Mesozoic Tethys
R. B. Pedersen and H. Furnes	183	Geology, magmatic affinity and geotectonic environment of some Caledonian ophiolites in Norway
B. A. Albrektsen, H. Furnes and R. B. Pedersen	205	Formation of dunites in mantle tectonites, Leka Ophiolite Complex, Norway
E. T. Berger and B. C. Weber	221	Dunitification of mantle lithosphere below the Society Archipelago: evidence for magma-mantle thermal and chemical transfers through xenoliths from the Papenoo Valley, Tahiti
I. Reuber, P. Nehlig and T. Juteau	253	Axial segmentation at a fossil oceanic spreading centre in the Haylayn block (Semail nappe, Oman): off-axis mantle diapir and advancing ridge tip

AUTHOR INDEX

Agar S. M., 119
Albrektsen B. A., 205
Artemjev M. E., 77
Auzende J.-M., 97
Berger E. T., 221
Bideau D., 97
Bonatti E., 97
Bryskin A. V., 87
Cannat M., 97
Doglioni C., 47
Furnes H., 183, 205
Hanuš V., 29
Honnorez J., 97
Huang S., 13
Juteau T., 253
Kaban M. K., 77
Kong X.-h., 1
Krylov S. V., 87
Lagabrielle Y., 97
Lemoine M., 141, 163
Loo H.-y., 1
Malavieille J., 97
Mamaloukas-Frangoulis V., 97
Mascle G., 141
Mascle J., 141
Mevel C., 97
Mishenkin B. P., 87
Moretti I., 47
Nehlig P., 253
Pedersen R. B., 183, 205
Ramana D. V., 67
Rao V. K., 67
Rehault J. P., 141
Reuber I., 253
Roure F., 47
Sharma S. R., 67
Sundar A., 67
Tricart P., 141, 163
Vaněk J., 29
Wang J., 13
Weber B. C., 221

PRINTED BY BPCC-AUP ABERDEEN LTD